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**SPILL PREVENTION, CONTROL, AND COUNTERMEASURES  
BEST MANAGEMENT PLAN**

**N O A A**

**NATIONAL WEATHER SERVICE  
Tucson RDA Facility  
Empire Mountain, Arizona**

Designated Person Responsible for Spill Prevention (DRO):

Printed Name: Glen Sampson - MIC

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: 520-670-5156

The Regional Environmental Compliance Officer (RECO) has reviewed the facility and determined that an SPCC Plan is not required per 40 CFR 112. This Plan is developed strictly as a Best Management Plan. The determination is based on :

  X   The facility does not exceed capacity.

\_\_\_\_\_ The facility meets capacity requirements but, a discharge will not reach navigable waterways.

RECO Printed Name: Thanh Minh Trinh, P. E.  
Phone: (206) 526-6647

RECO Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **PART I - GENERAL INFORMATION**

### **A. GENERAL**

This section of the Best Management Practices plan provides general information about the facility.

- 1. Name:**  
National Weather Service, Radar Acquisition Facility, Empire Mountain, Arizona

- 2. Date of Initial Operation:**  
1995 — Generator Shelter with Interior Fuel Tanks Installed

- 3. Location**  
National Weather Service RDA Site  
Street: 21 nmi SE of Downtown Tucson  
City: Empire Mountain - Pima County  
State/Zip: Arizona  
Latitude: 31° - 53' - 37" North  
Longitude: 110 ° - 37' - 49" West  
Elevation: 5205 ft. MSL

- 4. Name and phone number of Owner (POC)**  
National Weather Service Forecast Office  
520 North Park Avenue STE 304  
Tucson, Arizona 85719  
Phone: (520) 670-5156

- 5. Facility Contacts (Environmental coordinator, Area Safety Representative, Alternate, Focal Point, First Responder)**

<u>Name</u>	<u>Title</u>	<u>Telephone Number</u>
Mic Sherwood	Envir. Focal Point	(520) 670-5156
Glen Sampson	MIC	(520) 670-5156

## **B. SITE DESCRIPTION AND OPERATIONS**

This section describes the site and its operations.

### **1. Facility Location, Layout, and Operations**

The facility is located in rural developed area in the Empire Mountain Range in Pima County, about 21 nmi southeast of downtown Tucson (Appendix J - Figure 1). Radar data from this site are transmitted back to the WFO via telephone lines. The site is on land owned by federal government and managed by the NOAA. The NWS site consists of a 40 acre' parcel of ground with a 90' x 60' fenced area containing the NWS Radar Data Acquisition (RDA) facility which includes a 30 meter high radar antenna tower with a radome and antenna, an Equipment Shelter, a Generator Shelter, an Uninterrupted Power Shelter and a maintenance trailer. The entire site is fenced with an 8-foot high chain link fence with barbed wire and locked gates. The site is a small flat area which has been carved out of a steep mountainside for the installation of the radar facility. (Appendix J -Figure 2). Access to the site is by wheeled vehicle on paved and unpaved roads.

### **2. Fuel Usage**

Fuel consumption at this remote site varies according to the generator operation. The generator is tested for a one-half-hour period each week and it is automatically started if the commercial power is interrupted. The generator may be started manually from the WFO when weather conditions threaten to interrupt the commercial power. The Generator Day Tanks are normally filled once each year with approximately 150-gallons of #1 Diesel Fuel.

### **3. Fuel Storage**

Two 240 gallon, interconnected, steel day tanks are installed in the Generator Shelter to supply diesel fuel to an emergency generator. The Generator Shelter has sufficient spill capacity to provide secondary containment sufficient to handle all of the oil in the two day tanks.

### **4. Piping**

Piping for the RDA tanks are all located in the building, above the tanks, and are fully accessible for inspection and maintenance.

## **5. Spill Risks**

The AST and associated generator are located in a very flat area. The site has been excavated out of the side of a steep mountain and is located on the south side and near the top of the mountain. The soil is sandy and porous. Any spilled fuel oil from the site or the tank truck will be quickly absorbed by the soil (Appendix J - Figure 2). In the event of a fuel spill, from this site, waterways or water supply will not be impacted. In the event of diesel fuel spillage, all fuel will remain within a short distance of the NWS facilities and any soil contamination can be mitigated as required.

## **6. Chemical Storage Locations**

In addition to the diesel fuel used for the emergency power generator, this facility also stores chemicals ( e.g., oils, paint, solvents, antifreeze, cleaning compounds and pesticides) for the operation, maintenance and testing of station facilities and equipment. These are stored/used in the following location(s):

### **Location :**

- a. Unused oil in original containers — Stored in the TPMS Shelter
- b. Paint in spray cans - Stored in Flammable Locker located in the maintenance trailer.
- c. Station Cleaning Supplies — Stored in the RDA Shelter
- d. Lubricants in spray cans — Stored in Flammable Locker in the maintenance trailer.
- e. Pesticides — none.
- f. New Batteries — none.
- g. New Fluorescent Light tubes — none.

## **7. Permits Required (Copies Attached in Appendix H)**

- Permits Not required

## Part II - OPERATIONAL PROCEDURES FOR SPILL PREVENTION

**A. Tank Refueling Operations.** This section discusses the procedures that shall be used during unloading of fuel from the tank truck into the AST to prevent spills. This procedure shall be documented every time refueling occurs using the form found in Appendix A. Copies of this form shall be kept for five (5) years.

1. Ensure that the delivery driver understands the road conditions and the problems associated with delivering fuel to this remote mountain site.
2. The following procedure shall be used **before** fuel unloading: (APPENDIX A)
  - a. The Facility Manager or his designated representative should determine the available capacity (ullage) of the AST by converting the reading on the fuel gauge to gallons (See Appendix A). This ullage is communicated to the fuel supply contractor and marked in the fueling log.
  - b. Move spill containment equipment such as booms, spill barriers or spill kits into the unloading area.
  - c. Block the tank truck wheels.
  - d. Place drip pans under all pump hose fittings (if applicable) before unloading.
  - e. The Facility Manager or his designated representative and the delivery driver ensure the fill nozzle is placed in the appropriate AST appurtenance.
3. The following procedure shall be used **during** the fuel unloading period: (APPENDIX A)
  - a.. The Facility Manager or his designated representative and the delivery driver shall remain with or near the vehicle and the fuel tanks at all times during unloading. Gauges on the AST and the truck, as well as the fueling nozzle, shall be continuously monitored to ensure the ullage is not exceeded. If the audible high-level alarm sounds, stop the unloading procedure immediately to ensure fuel ullage is not exceeded.
4. The following procedure shall be used **after** fuel unloading is completed: (Appendix A)
  - a. Record the amount of fuel transferred to the AST in the log (Appendix A).
  - b. Drain the fill hose and then ensure that all drain valves are closed (if applicable) before removal of the hose from the tank
  - c. Pour any uncontaminated fuel in the drip pans, tank truck containment pool, or spill pipe spill bucket container into the AST (if it has the capacity) or dispose of appropriately.
  - d. Inspect the tank truck before removing the blocks to ensure the lines have been disconnected from the tank.
  - e. Remove the blocks from truck wheels.
  - f. Place a copy of the fuel-unloading checklist in the SPCC BMP.

## **PART III - SPILL COUNTERMEASURES AND REPORTING**

### **A. SPILL COUNTERMEASURES**

This section presents countermeasures to contain, clean up, and mitigate the effects of any oil spills at this site.

A spill containment and cleanup activity will never take precedence over the safety of personnel. No countermeasures will be undertaken until conditions are safe for workers. The **SWIMS** procedure should be implemented as countermeasures:

- S -** Stop the leak and eliminate ignition sources.
  - a. Attempt to seal or some how stop leak if it can be done safely.
  - b. Attempt to divert flow away from any drainage ditch, storm sewer or sanitary sewer with a spill barrier or the contents of spill kit. The spill kit is located in the Generator Building.
  - c. Eliminate all ignition sources in the immediate area.
- W -** Warn others.
  - a. Yell out “SPILL”. Inform the person in-charge at your facility.
  - b. Account for all personnel and ensure their safety.
  - c. Notify contacts and emergency response contractor as described in the following section for assistance in control and cleanup.
- I -** Isolate the area.
  - a. Rope off the area
- M -** Minimize your exposure to the spilled material by use of appropriate clothing and protective equipment. If possible, remain upwind of the spilled material.
- S -** Standby to assist the emergency response contractor.

**B. SPILL REPORTING (APPENDIX C):**

**1. General Notification Procedures For All Spills:**

Within 24 hours, the responsible person or designee (on this plan title page or in Part 1, A.5.) is directly charged with reporting **all** oil spills that result from facility operations as follows:

- a. In the event of an emergency (e.g., fire, or injury), call **911**.
- b. Notify the appropriate persons within your WFO, Regional Office and line office:

**National Weather Service:**

**Mike Jacob, NWS Environmental Compliance Officer (NWSH)**

**Phone number: (301) 713-1838 Ext. 165, [Jmichael.Jacob@NOAA.GOV](mailto:Jmichael.Jacob@NOAA.GOV)**

**Olga Kebis, NWS Safety Officer (NWSH)**

**Phone number: (301) 713-1838 Ext. 173, [Olga.Kebis@NOAA.GOV](mailto:Olga.Kebis@NOAA.GOV)**

**Robert Kinsinger, Regional Environmental Compliance Coordinator (ECC)  
in Western Region Headquarters**

**Phone number: (801) 524-5138 Ext. 223 Email: [robert.kinsinger@noaa.gov](mailto:robert.kinsinger@noaa.gov)**

- c. **NOAA Environmental Compliance and Safety Office Program:** E-mail or call your **RECO**.

**WASC [Thanh.M.Trinh@NOAA.GOV](mailto:Thanh.M.Trinh@NOAA.GOV) Phone: (206) 526-6647**

- d. **LECO – Pima County Office of Emergency Management and Homeland Security**

**Mike Walsh Phone (520) 798-3920 or (520) 798-0600**

**Note: LECO & RECO** must determine if Federal or State notification is required and follow up accordingly. (EPA requires notification of the National Response Center if: (1) A discharge of more than 1,000 gallons of oil into or upon navigable waters or adjoining shore lines in a single event **OR** (2) Two spill events that cause visible sheens upon navigable waters or adjoining shore lines within any 12-month period.

**EPA National Response Center (800) 424-8802**

**State of Arizona Emergency Response Hot Line (602) 771-2330**



## 2. Cleanup Contractor Notification

An emergency response contractor should also be notified to assist with the clean up if necessary. **NWS/WFO at Tucson**, has identified and contacted the following contractors that are available for an emergency response:

<u>Contractor(s)</u>	<u>Phone Number</u>
• Apex Envirotech, Inc.	(1-800) 291-0908

## 3. Spill Report

Complete a spill report using the format provided in APPENDIX C. Send this to your RECO with a copy to the Western Region ECC.

### C. Training

The Environmental/Safety Focal Point and an alternate should be trained in 1)the refueling procedures, 2)countermeasures, and 3)spill reporting. The alternate should be designated in case the primary person is off site at the time of a spill.

(See APPENDIX D for Training Outline and Training Record form)

### D. Personal Protective Equipment (PPE)

- PPE information is specified in the **MSDS**
- Eye protection is accomplished by the use of **Chemical Goggles**
- Hand protection is accomplished by the use of **Nitril Gloves**
- Other clothing & equipment - if contaminated, must be removed and laundered before reuse. Items which cannot be laundered should be discarded.
- Appropriate NIOSH-approved respiratory protection to avoid inhalation of mist or vapors which may be present under hot temperature conditions.

## **APPENDIX A**

### **TANK ULLAGE/FUELING LOG AND FUEL UNLOADING PROCEDURES CHECKLIST**

**APPENDIX A-1**  
**TANK ULLAGE AND FUELING LOG**

Station Name: \_\_\_\_\_

Tank Capacity: \_\_\_\_\_ gallons

<b>Date</b>	<b>Initials</b>	<b>Gauge Reading</b>	<b>Initial Volume of Fuel in Tank <sup>a</sup> (Gallons)</b>	<b>Available Capacity or Ullage <sup>b</sup> (Gallons)</b>	<b>Quantity Added (Gallons)</b>	<b>Comments</b>

Notes:

- a. From gage reading
- b. Available capacity = tank capacity - initial volume of fuel in tank

## APPENDIX A-2

### FUEL UNLOADING PROCEDURE CHECKLIST

**Date:** \_\_\_\_\_ **Tank:** \_\_\_\_\_

**NWS Representative:** \_\_\_\_\_ **Supplier:** \_\_\_\_\_

✓	ITEM	DESCRIPTION	COMMENTS
	<b>The following six items must be completed <u>prior</u> to fuel unloading:</b>		
	1	Move spill containment equipment, such as booms or spill barriers, into the unloading area.	
	2	Ensure the audible high-level alarm system and automatic shutoff valve are functioning properly (if applicable).	
	3	Determine the available capacity (ullage) of the tank by converting the reading on the fuel gauge to gallons (see Appendix A-1). The ullage should then be marked in the fueling log and communicated to the tank truck unloading contractor.	
	4	Block the wheels of the tank truck.	
	5	Place drip pans under all pump hose fittings (if applicable) after the hose is hooked up to the tank and before unloading.	
	6	Ensure the fill nozzle is placed in the appropriate tank appurtenance.	
	<b>During unloading</b>		
	7	Ensure that the NWS representative and the tank truck operator remain with the vehicle at all times during unloading.	
	8	Monitor the gauges on the tank and the truck continuously to ensure the ullage is not exceeded.	
	<b>After fuel unloading is completed</b>		
	9	Record the amount of fuel unloaded in the log (Appendix A-1).	
	10	Before removing the fill hose from the tank, ensure that it is drained and that all drain valves are closed (if applicable).	
	11	Any fuel accumulated in the drip pans or spill container on the fill pipe should be poured into the tank (if it has the capacity) or disposed of appropriately (describe how it was disposed of, if applicable).	
	12	Inspect the tank truck before removing the blocks to ensure the lines have been disconnected from the tank.	
	13	Remove the blocks from the tank truck wheels.	
	14	Place a copy of this fuel unloading procedure checklist in the Best Management Plan.	

**APPENDIX B**

**TANK INSPECTION CHECKLIST**

MONTHLY INSPECTION CHECKLIST			
Date of Inspection:		Tank Name or No.:	
Date of Last Inspection:		Inspected by:	Signature:
<b>A. TANKS</b>	YES	NO	NOTES
1. Are tanks marked properly?			
2. Is area atop and around tank and within berm free of combustible materials and debris? stains?			
3. Is there any oil on the ground, concrete, or asphalt around the tank?			
4. Are there any visible cracks or indications of corrosion on the tank, at fittings, joints, or seals (such as paint peeling or rust spots)?			
5. Are there any raised spots, dents, or cracks on the tank?			
6. Does it appear that the foundation has shifted or settled?			
7. Is the fuel gauge working properly?			
8. Are all vents clear so they may properly operate?			
9. If rainwater is present within containment, does capacity remain for spill control, if applicable?			
<b>B. PIPING</b>			
1. Is there any oil on the outside of or under any aboveground piping, hoses, fittings, or valves?			
2. Are aboveground piping hoses, fittings, or valves in good working condition?			
<b>C. SECURITY/SAFETY/SPILL COUNTERMEASURES</b>			
1. Are lights working properly to detect a spill at night?			
2. Are all locks in the "lock" position?			
3. Are all warning signs properly posted and readable?			
4. Are vehicle guard posts in place and properly secured (if applicable)?			
5. Are spill kits easily accessible, protected from the weather, complete, and replenished if necessary?			
<b>Corrective Actions Required:</b>			

ANNUAL INSPECTION CHECKLIST (Page 1 of 1)			
Date of Inspection:		Tank Name or No.:	
Date of Last Inspection:		Inspected by:	
		Signature:	
<b>A. MONTHLY CHECKLIST</b>	<b>YES</b>	<b>NO</b>	<b>NOTES</b>
1. Have monthly inspection checklists been completed?			
<b>B. TANKS</b>			
1. Are all alarms and automatic shutoff devices working properly?			
2. Is interstitial monitor functioning properly (if applicable)?			
<b>C. OTHER</b>			
1.			
<b>Corrective Actions Required:</b>			

**APPENDIX C**

**SPILL REPORTING**



**APPENDIX C**  
**SPILL REPORTING**

<b>1. GENERAL</b>		
Name of Facility:	Address:	
Completed By:	Organization:	
Position:	Phone:	
<b>2. SPILL INFORMATION</b>		
Date:	Time:	
Location at Facility:	Quantity:	
Substance Spilled:	Other:	
<b>3. OUTSIDE NOTIFICATIONS: ( Insert telephone numbers)</b>		
<b>Agencies</b>	<b>Record the external regulatory agency representative name when making the calls.</b>	<b>Date &amp; Time</b>
Call <b>911</b> for emergency assistance		
Regional Management (see Part III Section B subparagraph 1.b) (801) 524-5138 Ext.223		
Line Office Environmental Compliance Officer (see Part III Section B subparagraph 1b) (301) 713-1838 Ext 165 or Ext 173		
<b>NOAA, RECO</b> (see Part III Section B subparagraph 1.c) (205) 526-6647		
EPA National Response Center or U.S. Coast Guard : (800) 424-8802		
State of Arizona Emergency Response Line Phone (602) 771-2330		
<b>LECO</b> Pima County Office of Emergency Management & Homeland Security Mike Walsh : (520) 798-3920 or (520) 798-0600		
<b>4. INFORMATION ON SOURCE AND CAUSE</b>		
<b>5. DESCRIPTION OF ENVIRONMENTAL DAMAGE</b>		
<b>6. CLEANUP ACTION(S) TAKEN</b>		
<b>7. CORRECTIVE ACTION(S) TO PREVENT FUTURE SPILLS</b>		

Note: All information must be filled in. If something is unknown, write "unknown".  
Copies must be sent, preferably by e-mail, to the NWS/NOAA personnel listed above.

**APPENDIX D**

**TRAINING OUTLINE & TRAINING RECORD**

## **APPENDIX D-1**

### **TRAINING OUTLINE: SPILL PREVENTION, CONTROL AND COUNTERMEASURES**

Training will be provided for facility personnel at the following times:

1. System startup or whenever new equipment is installed
2. Within the first week of employment for new personnel
3. Annually

The training will include complete instruction in the elements of the facility's Spill Prevention, Control, and Countermeasure plan and will include the following:

1. Pollution control laws, rules, and regulations including a summary of Title 40 of the Code of Federal Regulations Part 112 "Oil Pollution Prevention" (see Attachment)
2. Fuel Storage System
  - A. Purpose and application of the following system elements:
    1. Tanks
    2. Piping
    3. Pumps
    4. Accessory equipment
    5. Electronic monitors
  - B. Operation, maintenance, and inspection of system elements
3. Spill Prevention
  - A. Potential spill sources
  - B. Spill flow direction and impact on navigable waters
  - C. Procedures to prevent spills, especially during fuel unloading
4. Spill Control
  - A. Secondary containment
  - B. Safety valves
  - C. Pump and equipment shutoff switches
  - D. Use of catch basin inlet covers or other diversionary devices
5. Spill Countermeasures
  - A. Location and use of emergency phone numbers
  - B. Location and use of fire extinguishers
  - C. Location and use of spill cleanup kit
  - D. Stopping the leak

## APPENDIX D-2

### TRAINING REPORT FORM

DATE OF TRAINING	EMPLOYEE TRAINED	TRAINER	REMARKS

**APPENDIX E**

**MATERIALS SAFETY DATA SHEET ATTACHMENT**

**APPENDIX F**

**SPILL CLEANUP KIT INFORMATION ATTACHMENT**

**APPENDIX G**

**FUEL TANK DATA AND INFORMATION**

# **APPENDIX H**

## **PERMITS**



**APPENDIX I**

**PHOTOGRAPHS OF FACILITY TANKS AND PIPING**

## **APPENDIX J (MAPS & DRAWINGS)**

**FIGURE 1: .....Site Location Map**

**FIGURE 2: .....Topographic Map & Site Layout**

**FIGURE 3: ..... Site Piping Diagram**